section. In order to maintain the hinge cover **50***j* in a state closing the hinge housing **10***j*, at least one locking protrusion **502** is provided at an end **504** of the hinge cover **50***j* opposite to the hinge means **510** when viewed in the X-axis direction. At least one locking hole **143***a* is also formed at the wall **143** of the hinge housing **10***j* so that it releasably engages with the locking protrusion **502**.

As apparent from various embodiments of the present invention as mentioned above, the hinge mechanism of the present invention is assembled in a particular manner capable of achieving an improvement in the efficiency of the assembling process, as compared to conventional hinge mechanisms. That is, in the hinge mechanism of the present invention, the hinge cover adapted to cover the top of the hinge housing is hingably coupled to the hinge housing. This configuration provides convenience in regard to the assembling process. The hinge mechanism of the present invention also provides an improvement in the compactness of products. Also, the hinge mechanism of the present invention can carry out stable opening and closing operations which are important for folder type and flip type portable phones because it includes hinge modules symmetrically arranged. The hinge mechanism of the present invention, which has been described as being applied to folder type and flip type portable phones, is also applicable to any portable terminals.

While this invention has been described in connection with what is presently considered to be the most practical and preferred embodiment, it is to be understood that the invention is not limited to the disclosed embodiment, but, on the contrary, it is intended to cover various modifications within the spirit and scope of the appended claims.

What is claimed is:

1. In a portable phone including a phone body, a cover, and a hinge mechanism adapted to mechanically couple the cover to the phone body, the hinge mechanism comprising:

at least one hinge module mounted to said phone body and adapted to hinge said cover with respect to said phone body for opening and closing said cover, said hinge module comprising:

a hinge housing having a bottom wall, and a pair of opposite lateral end walls spaced from each other in a rotating axis direction, one of said lateral walls having a hole, said hinge housing being completely opened at an upper end thereof to facilitate assembly of said at least one hinge module, and also having a pair of opposite longitudinal end walls spaced from each other in a direction normal to said rotating axis direction;

a hinge shaft having a mountain-shaped portion with a pair of opposite circumferential flat surfaces and a pair of opposite circumferential curved surfaces, said hinge shaft being assembled in said hinge module through said opened upper end of said hinge housing and being arranged in said hinge housing in such a fashion that said shaft portion extends through said hole of said hinge housing outwardly from said hinge housing and is coupled to said cover, so that it rotates together with said cover;

a hinge cam being assembled in said hinge module through said opened upper end of said hinge housing and arranged in said hinge housing in such a fashion that it faces said hinge shaft in said rotating axis direction, said hinge cam having, at one longitudinal portion thereof, a pair of mountain-shaped protrusions respectively provided with facing cam surfaces defining a valley-shaped portion therebetween, and, at the other longitudinal portion thereof, a mounting structure, said hinge cam engaging at said valley-shaped portion with said mountain-shaped portion of said hinge shaft in such a fashion that it slides straight in said rotating axis direction in accordance with said rotation of said hinge shaft; and

a hinge spring being assembled in said hinge module through said opened upper end of said hinge housing and arranged in said hinge housing in said rotating axis direction in such a fashion that it is mounted to said mounting structure of said hinge cam at one end thereof and is in contact with the other lateral end wall of said hinge housing at the other end thereof, said hinge spring serving to urge said hinge cam toward said hinge shaft in said rotating axis direction.

2. The hinge mechanism according to claim **1**, wherein said at least one hinge module comprises two hinge modules mounted in a receiving portion of said phone body in such a fashion that they are asymmetric to each other.

3. The hinge mechanism according to claim **1**, further comprising:

a hinge cover mounted to said hinge housing and adapted to close said opened upper end of said hinge housing.

4. The hinge mechanism according to claim **3**, wherein said hinge cover has means for coupling said hinge cover to said hinge housing in a state closing said opened upper end of said hinge housing.

5. The hinge mechanism according to claim **1**, wherein said hinge shaft mountain-shaped portion is provided with a pair of opposite cam surfaces at one longitudinal portion thereof and said hinge shaft is provided with a shaft portion at the other longitudinal portion thereof, said shaft portion being provided at a free end thereof.

6. The hinge mechanism according to claim **1**, further comprising means for guiding said straight sliding movement of said hinge cam in said rotating axis direction.

7. The hinge mechanism according to claim **1**, wherein said mounting structure is a mounting protrusion extending from said hinge cam in said rotating axis direction.

8. In a flip type portable phone including a phone body, a flip cover, and a hinge mechanism adapted to mechanically couple the flip cover to the phone body, the hinge mechanism comprising:

a pair of hinge modules mounted to said phone body in such a fashion that they are adapted to hinge said flip cover with respect to said phone body for opening and closing said flip cover, each of said hinge modules comprising:

a hinge housing having a bottom wall, and a pair of opposite lateral end walls spaced from each other in a rotating axis direction, one of said lateral walls having a hole, said hinge housing being completely opened at an upper end thereof to facilitate assembly of said hinge module, and also having a pair of opposite longitudinal end walls spaced from each other in a direction normal to said rotating axis direction, one of said longitudinal end walls having at least one engagement hole;

a hinge shaft having a mountain-shaped portion provided with a pair of opposite cam surfaces at one longitudinal portion thereof and a shaft portion at the other longitudinal portion thereof, said shaft portion being provided at a free end thereof with a pair of opposite circumferential flat surfaces and a pair of opposite circumferential curved surfaces, said hinge shaft being arranged in said hinge housing in such a fashion that said shaft portion extends through said